

providing a continuous web of heat-sealable plastic material extending lengthwise with opposing edge portions;

folding the web longitudinally;

continuously moving the web in a forward direction during the folding step;

sealing the edge portions of the web to form a longitudinal hermetic seal, thereby defining a continuous tube;

inserting the cheese into the tube;

flattening the tube after the cheese is inserted to form a continuous flat ribbon of the cheese disposed within the flattened tube;

urging portions of the flattened tube together at predetermined intervals to define a plurality of cross-sealing zones, and applying sufficient pressure at the cross-sealing zones to eliminate substantially all of the cheese from the cross-sealing zones; and

heating the cross-sealing zones for a period of time and at a temperature sufficient to hermetically seal the cross-sealing zones to form, with the longitudinal hermetic seal, hermetically sealed individual packages entirely enclosing individual slices of the cheese.

15

14

23. The process of Claim 22, wherein the web is continually moved in a forward direction during the sealing of the edge portions of the web and during the formation of the cross-seals, at

33

a rate sufficient to produce in excess of 700 hermetically sealed individual cheese packages per minute.

16

14

24. The process of Claim 22, wherein the web is continually moved in a forward direction during the sealing of the edge portions of the web and during the formation of the cross-seals, at a rate sufficient to produce in excess of approximately 1000 hermetically sealed individual cheese packages per minute.

17

14

25. The process of Claim 22, further comprising the step of cooling the web after the web is flattened and before the cross-seals are formed.

CY  
cont...

18

26. An apparatus for packaging a cheese formulation into individual slices, comprising:

a device for folding a web of thermoplastic material extending lengthwise with opposing edge portions, the web having a width defined by the distance the web extends transverse to its length;

a longitudinal sealing station that continuously seals the edge portions of the web to form a longitudinal hermetic seal, thereby defining a continuous tube;

means for inserting the cheese into the tube;

a device for flattening the tube after the cheese is inserted to form a continuous flat ribbon of the cheese disposed

34

within the flattened tube;

a cross-sealing station disposed downstream of the longitudinal sealing station for urging portions of the flattened tube together at predetermined intervals to define a plurality of cross-sealing zones extending across the entire web width and separating adjacent cheese slices, for applying sufficient pressure at the cross-sealing zones to eliminate substantially all of the cheese from the cross-sealing zones, and for heating the cross-sealing zones for a period of time and at a temperature sufficient to hermetically seal the cross-sealing zones to form, with the longitudinal hermetic seal, hermetically sealed individual packages entirely enclosing individual slices of the cheese; and

means for continuously conveying the web in a forward direction from the longitudinal sealing station to the cross-sealing station.

19

21. The apparatus of Claim 26, further comprising means for cooling the web after the web is flattened and before the cross-seals are formed.

20

28. The apparatus of Claim 27, wherein the means for cooling the web includes a tank containing water at a temperature of approximately between 32°F and 50°F.

21

29. The apparatus of Claim 26, wherein the thermoplastic

18

35

material includes polypropylene.

~~24~~ 20. The apparatus of Claim ~~26~~ <sup>18</sup>, wherein the temperature used to hermetically seal the cross-seals is between about 230°F and 240°F.

~~23~~ 21. The apparatus of Claim ~~26~~ <sup>18</sup>, wherein the length of each cross-seal between adjacent cheese slices is approximately one-quarter inch.

~~24~~ 22. The apparatus of Claim ~~26~~ <sup>18</sup>, wherein the cross-sealing station includes a first and a second series of sealing members, with at least some of the first series sealing members being heated, and the second series of sealing members comprising a resilient material.  
*CJ  
Contd.*

~~25~~ 23. The apparatus of Claim ~~26~~ <sup>18</sup>, wherein the apparatus is capable of producing in excess of 700 hermetically sealed individual cheese packages per minute.

~~26~~ 24. The apparatus of Claim ~~26~~ <sup>18</sup>, wherein the apparatus is capable of producing in excess of approximately 1000 hermetically sealed individual cheese packages per minute.